FIG. 1A

Consensus Sequence

Symbol comparison table: blosum62.cmp CompCheck: 6430

Name:	hTRADEalpha_1	Len: 423	Check: 4050	Weight:	1.00
Name:	hTRAIN_1	Len: 423	Check: 4128	Weight:	1.00
Name:	hTRADEbeta_1	Len: 423	Check: 7937	Weight:	1.00
Name:	hApo420pep	Len: 423	Check: 8173	Weight:	1.00

//

```
                1                                                   50
hTRADEalpha_    MALKVLLEQE KTFFTLLVLL GYLSCKVTCE SGDCRQQEFR DRSGNCVPCN
    hTRAIN_1    MALKVLLEQE KTFFTLLVLL GYLSCKVTCE SGDCRQQEFR DRSGNCVPCN
hTRADEbeta_1    MALKVLLEQE KTFFTLLVLL GYLSCKVTCE TGDCRQQEFR DRSGNCVPCN
  hApo420pep    MALKVLLEQE KTFFTLLVLL GYLSCKVTCE SGDCRQQEFR DRSGNCVPCN
   Consensus    MALKVLLEQE KTFFTLLVLL GYLSCKVTCE SGDCRQQEFR DRSGNCVPCN

               51                                                  100
hTRADEalpha_    QCGPGMELSK ECGFGYGEDA QCVTCRLHRF KEDWGFQKCK PCLDCAVVNR
    hTRAIN_1    QCGPGMELSK ECGFGYGEDA QCVTCRLHRF KEDWGFQKCK PCLDCAVVNR
hTRADEbeta_1    QCGPGMELSK ECGFGYGEDA QCVTCRLHRF KEDWGFQKCK PCLDCAVVNR
  hApo420pep    QCGPGMELSK ECGFGYGEDA QCVACRLHRF KEDWGFQKCK PCLDCAVVNR
   Consensus    QCGPGMELSK ECGFGYGEDA QCVTCRLHRF KEDWGFQKCK PCLDCAVVNR

               101                                                 150
hTRADEalpha_    FQKANCSATS DAICGDCLPG FYRKTKLVGF QDMECVPCGD PPPPYEPHCA
    hTRAIN_1    FQKANCSATS DAICGDCLPG FYRKTKLVGF QDMECVPCGD PPPPYEPHCA
hTRADEbeta_1    FQKANCSATS DAICGDCLPG FYRKTKLVGF QDMECVPCGD PPPPYEPHCA
  hApo420pep    FQKANCSATS DAICGDCLPG FYRKTKLVGF QDMECVPCGD PPPPYEPHCA
   Consensus    FQKANCSATS DAICGDCLPG FYRKTKLVGF QDMECVPCGD PPPPYEPHCA
```

FIG. 1B

```
                151                                                 200
hTRADEalpha_    SKVNLVKIAS TASSPRDTAL AAVICSALAT VLLALLILCV IYCKRQFMEK
    hTRAIN_1    SKVNLVKIAS TASSPRDTAL AAVICSALAT VLLALLILCV IYCKRQFMEK
hTRADEbeta_1    SKVNLVKIAS TASSPRDTAL AAVICSALAT VLLALLILCV IYCKRQFMEK
  hApo420pep    SKVNLVKIAS TASSPRDTAL AAVICSALAT VLLALLILCV IYCKRQFMEK
   Consensus    SKVNLVKIAS TASSPRDTAL AAVICSALAT VLLALLILCV IYCKRQFMEK

                201                                                 250
hTRADEalpha_    KPSWSLRSQD IQYNGSELSC FDRPQLHEYA HRACCQCRRD SVQTCGPVRL
    hTRAIN_1    KPSWSLRSQD IQYNGSELSC FDRPQLHEYA HRACCQCRRD SVQTCGPVRL
hTRADEbeta_1    KPSWSLRSQD IQYNGSELSC LDRPQLHEYA HRACCQCRRD SVQTCGPVRL
  hApo420pep    KPSWSLRSQD IQYNETELSC FDRPQLHEYA HRACCQCRRD SVQTCGPVRL
   Consensus    KPSWSLRSQD IQYNGSELSC FDRPQLHEYA HRACCQCRRD SVQTCGPVRL

                251                                                 300
hTRADEalpha_    LPSMCCEEAC SPNPATLGCG VHSAASLQAR NAGPAGEMVP TFFGSLTQSI
    hTRAIN_1    LPSMCCEEAC SPNPATLGCG VHSAASLQAR NAGPAGEMVP TFFGSLTQSI
hTRADEbeta_1    LPSMCCEEAC SPNPATLGCG VHSAASLQAR NAGPAGEMVP TFFGSLTQSI
  hApo420pep    LPSMCCEEAC SPNPATLGCG VHSAASLQAR NAGPAGEMVP TFFGSLTQSI
   Consensus    LPSMCCEEAC SPNPATLGCG VHSAASLQAR NAGPAGEMVP TFFGSLTQSI
```

FIG. 1C

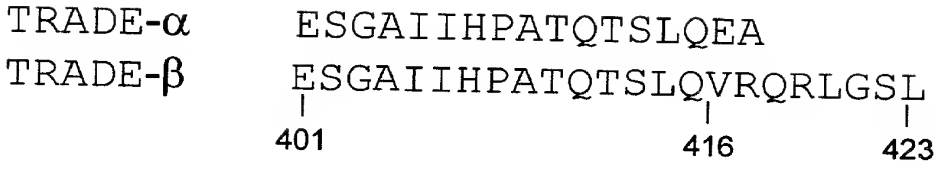
```
                301                                                  350
hTRADEalpha_    CGEFSDAWPL MQNPMGGDNI SFCDSYPELT GEDIHSLNPE LESSTSLDSN
    hTRAIN_1    CGEFSDAWPL MQNPMGGDNI SFCDSYPELT GEDIHSLNPE LESSTSLDSN
hTRADEbeta_1    CGEFSDAWPL MQNPMGGDNI SFCDSYPELA GEDIHSLNPE LESSTSLDSN
  hApo420pep    CGEFSDAWPL MQNPMGGDNI SFCDSYPELT GEDIHSLNPE LESSTSLDSN
   Consensus    CGEFSDAWPL MQNPMGGDNI SPCDSYPELT GEDIHSLNPE LESSTSLDSN

                351                                                  400
hTRADEalpha_    SSQDLVGGAV PVQSHSENFT AATDLSRYNN TLVESASTQD ALTMRSQLDQ
    hTRAIN_1    SSQDLVGGAV PVQSHSENFT AATDLSRYNN TLVESASTQD ALTMRSQLDQ
hTRADEbeta_1    SSQDLVGGAV PVQSHSENFT AATDLSRYNN TLVESASTQD ALTMRSQLDQ
  hApo420pep    SSQDLVGGAV PVQSHSENFT AATDLSRYNN TLVESASTQD ALTMRSQLDQ
   Consensus    SSQDLVGGAV PVQSHSENFT AATDLSRYNN TLVESASTQD ALTMRSQLDQ

                401                  423
hTRADEalpha_    ESGAIIHPAT QTSLQEA~~~ ~~~
    hTRAIN_1    ESGAVIHPAT QTSLQEA~~~ ~~~
hTRADEbeta_1    ESGAIIHPAT QTSLQVRQRL GSL
  hApo420pep    ESGAVIHPAT QTSLQVRQRL GSL
   Consensus    ESGA-IHPAT QTSLQ--QRL GSL
```

TOSO/20" 05/03/2020

FIG. 2



Replacement Sheet

FIG. 3

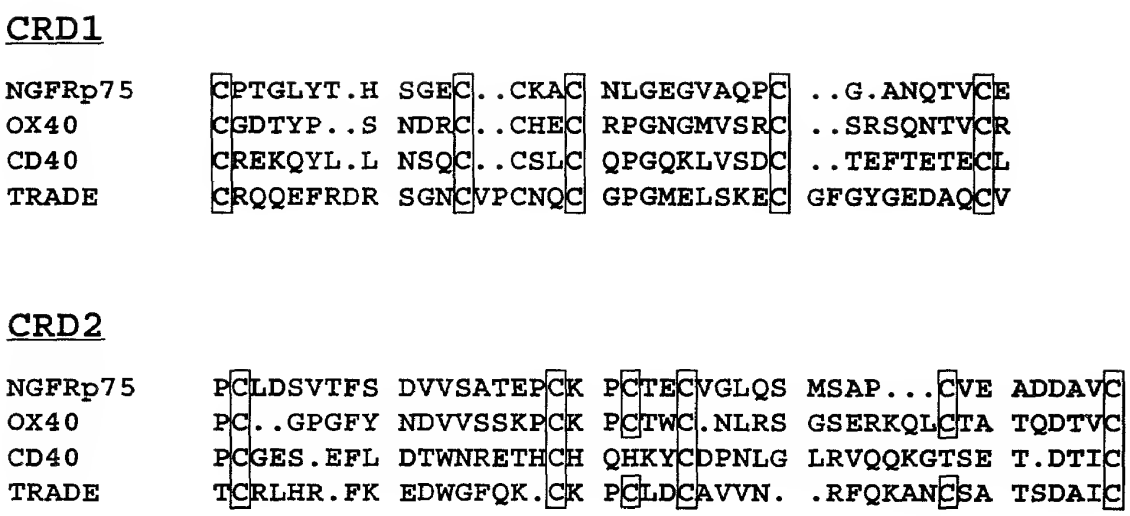


FIG. 4

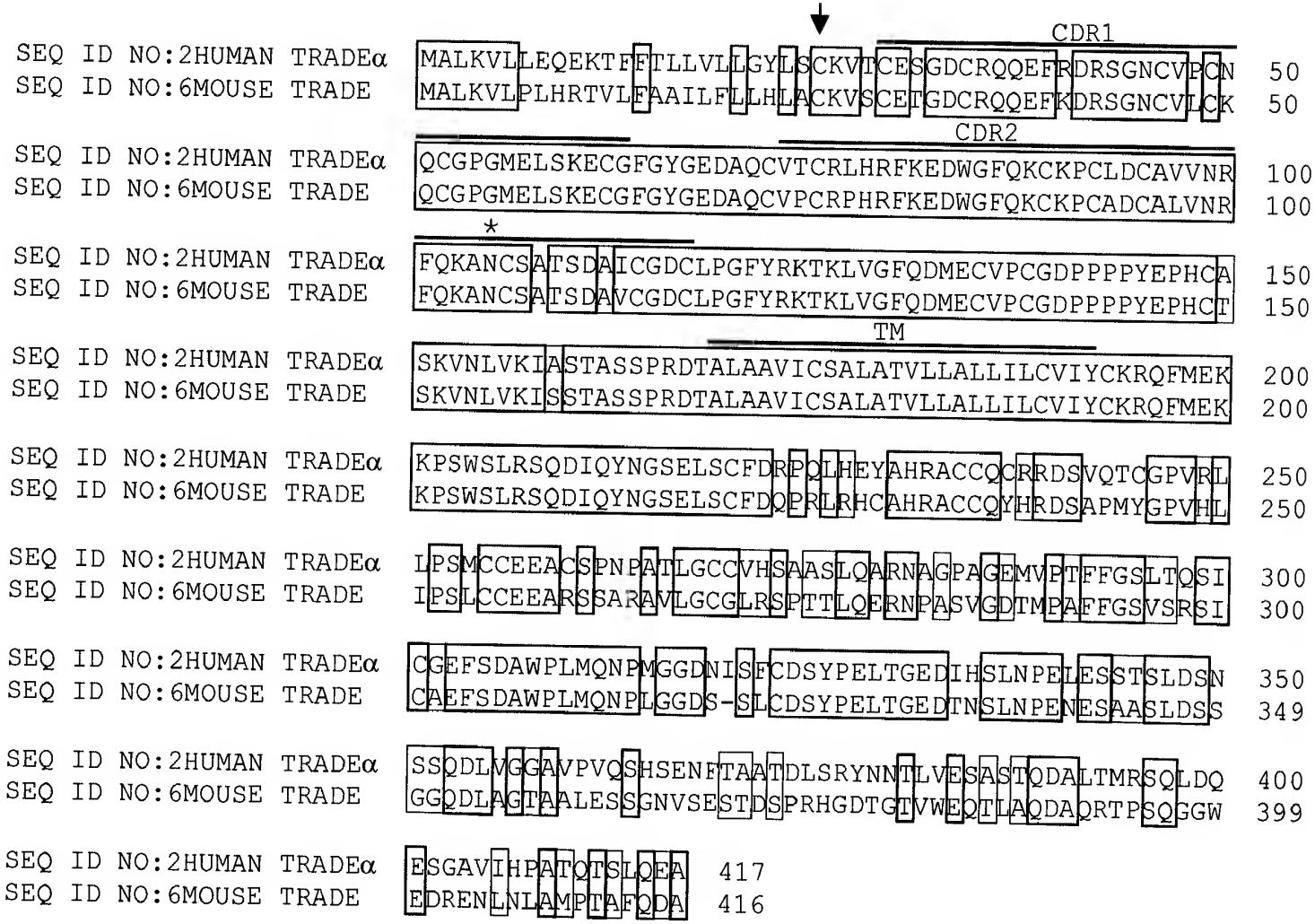

CDR1
CDR2
TM
SEQ ID NO:2HUMAN TRADEα MALKVLLEQEKTFFTLLVLLGYLSCKVTCESGDCRQQEFRDRSGNCVPCN 50
SEQ ID NO:6MOUSE TRADE MALKVLPLHRTVLFAAILFLLHLACKVSCETGDCRQQEFKDRSGNCVLCK 50
SEQ ID NO:2HUMAN TRADEα QCGPGMELSKECGFGYGEDAQCVTCRLHRFKEDWGFQKCKPCLDCAVVNR 100
SEQ ID NO:6MOUSE TRADE QCGPGMELSKECGFGYGEDAQCVPCRPHRFKEDWGFQKCKPCADCALVNR 100
SEQ ID NO:2HUMAN TRADEα FQKANCSATSDAICGDCLPGFYRKTKLVGFQDMECVPCGDPPPPYEPHCA 150
SEQ ID NO:6MOUSE TRADE FQKANCSATSDAVCGDCLPGFYRKTKLVGFQDMECVPCGDPPPPYEPHCT 150
SEQ ID NO:2HUMAN TRADEα SKVNLVKIASTASSPRDTALAAVICSALATVLLALLILCVIYCKRQFMEK 200
SEQ ID NO:6MOUSE TRADE SKVNLVKISSTASSPRDTALAAVICSALATVLLALLILCVIYCKRQFMEK 200
SEQ ID NO:2HUMAN TRADEα KPSWSLRSQDIQYNGSELSCFDRPQLHEYAHRACCQCRRDSVQTCGPVRL 250
SEQ ID NO:6MOUSE TRADE KPSWSLRSQDIQYNGSELSCFDQPRLRHCAHRACCQYHRDSAPMYGPVHL 250
SEQ ID NO:2HUMAN TRADEα LPSMCCEEACSPNPATLGCCVHSAASLQARNAGPAGEMVPTFFGSLTQSI 300
SEQ ID NO:6MOUSE TRADE IPSLCCEEARSSARAVLGCGLRSPTTLQERNPASVGDTMPAFFGSVSRSI 300
SEQ ID NO:2HUMAN TRADEα CGEFSDAWPLMQNPMGGDNISFCDSYPELTGEDIHSLNPELESSTSLDSN 350
SEQ ID NO:6MOUSE TRADE CAEFSDAWPLMQNPLGGDS-SLCDSYPELTGEDTNSLNPENESAASLDSS 349
SEQ ID NO:2HUMAN TRADEα SSQDLVGGAVPVQSHSENFTAATDLSRYNNTLVESASTQDALTMRSQLDQ 400
SEQ ID NO:6MOUSE TRADE GGQDLAGTAAALESSGNVSESTDSPRHGDTGTVWEQTLAQDAQRTPSQGGW 399
SEQ ID NO:2HUMAN TRADEα ESGAVIHPATQTSLQEA 417
SEQ ID NO:6MOUSE TRADE EDRENLNLAMPTAFQDA 416

FIG. 5A

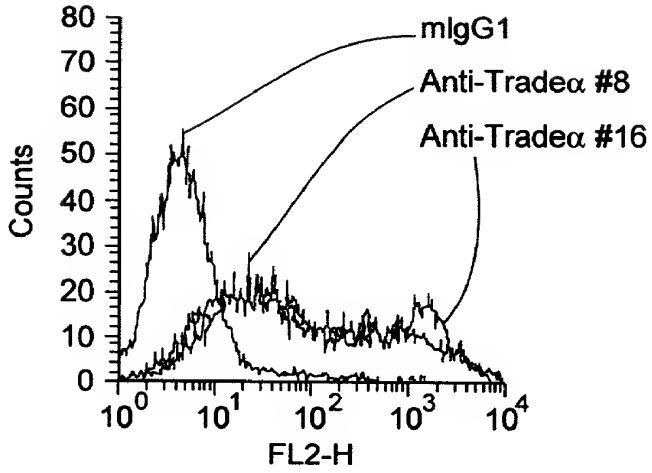


FIG. 5B

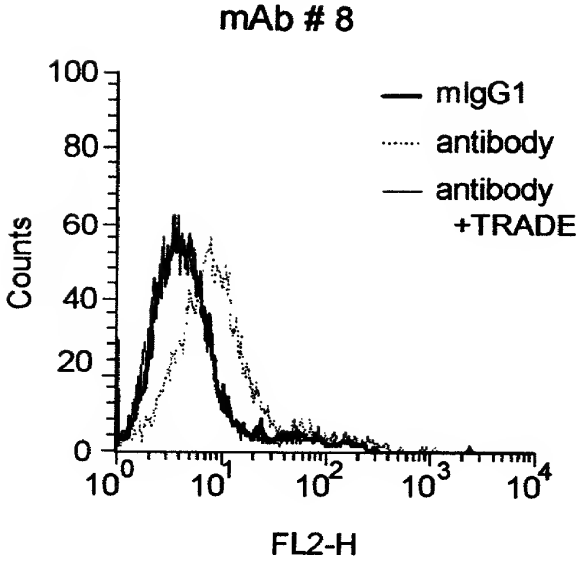


FIG. 5C

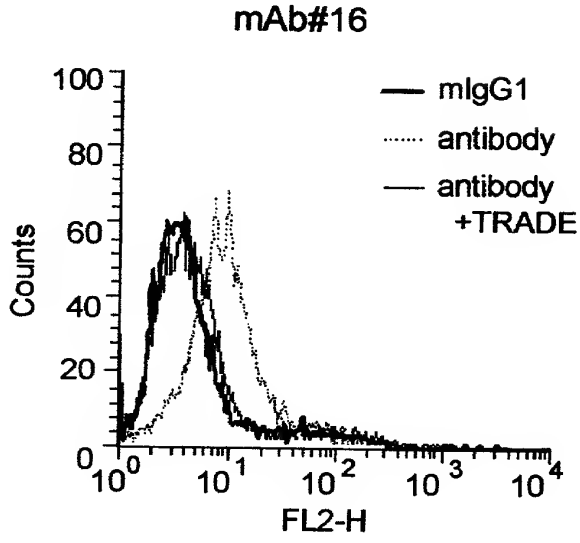


FIG. 6A

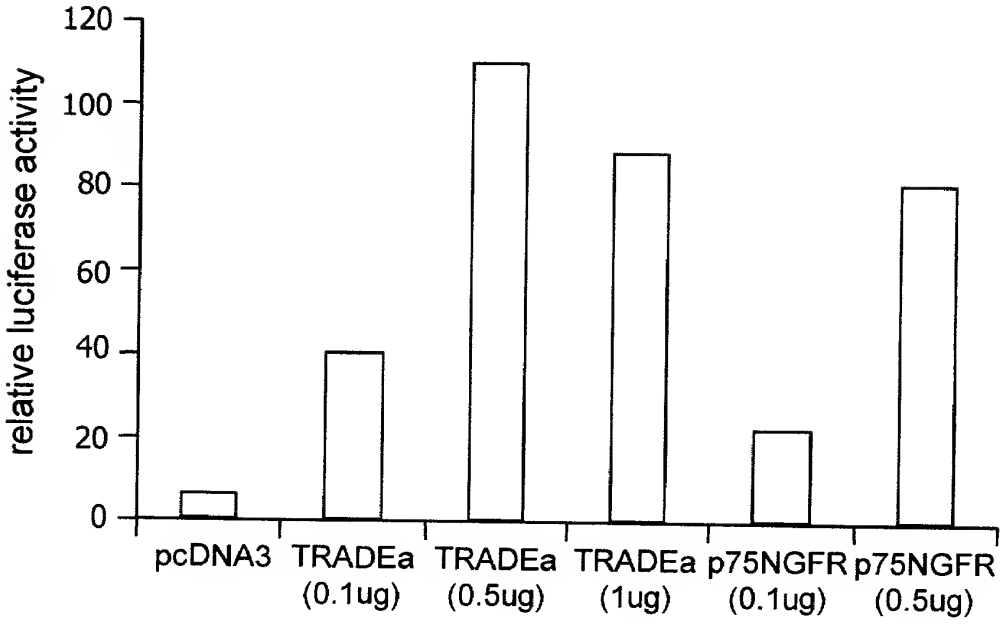

relative luciferase activity
120
100
80
60
40
20
0
pcDNA3
TRADEa (0.1ug)
TRADEa (0.5ug)
TRADEa (1ug)
p75NGFR (0.1ug)
p75NGFR (0.5ug)

FIG. 6B

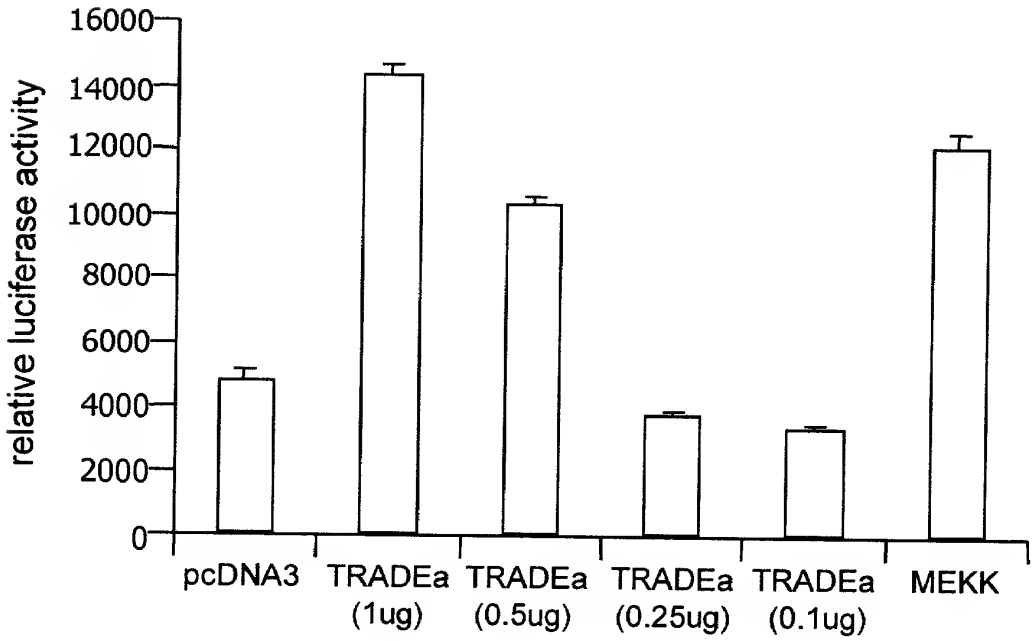

relative luciferase activity
16000
14000
12000
10000
8000
6000
4000
2000
0
pcDNA3
TRADEa (1ug)
TRADEa (0.5ug)
TRADEa (0.25ug)
TRADEa (0.1ug)
MEKK

FIG. 7A

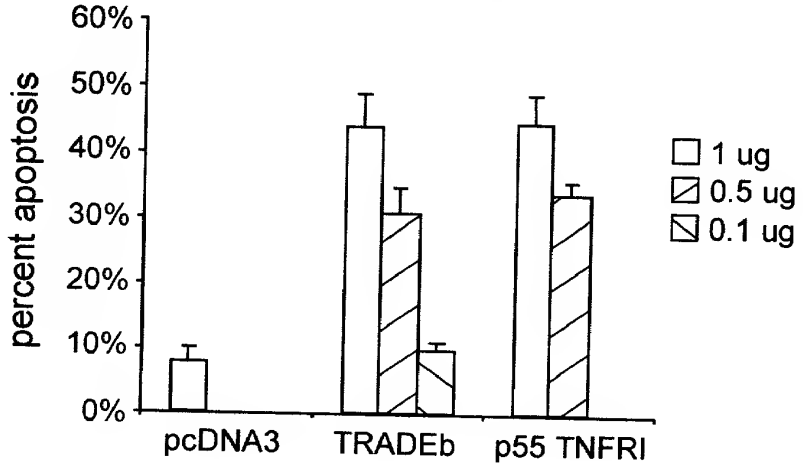

60%
50%
40%
30%
20%
10%
0%
percent apoptosis
1 ug
0.5 ug
0.1 ug
pcDNA3
TRADEb
p55 TNFRI

FIG. 7B

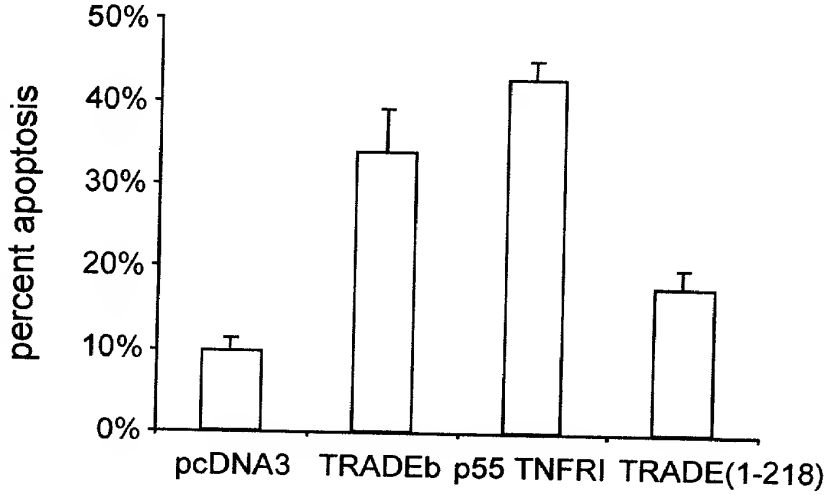

50%
40%
30%
20%
10%
0%
percent apoptosis
pcDNA3
TRADEb
p55 TNFRI
TRADE(1-218)

FIG. 8

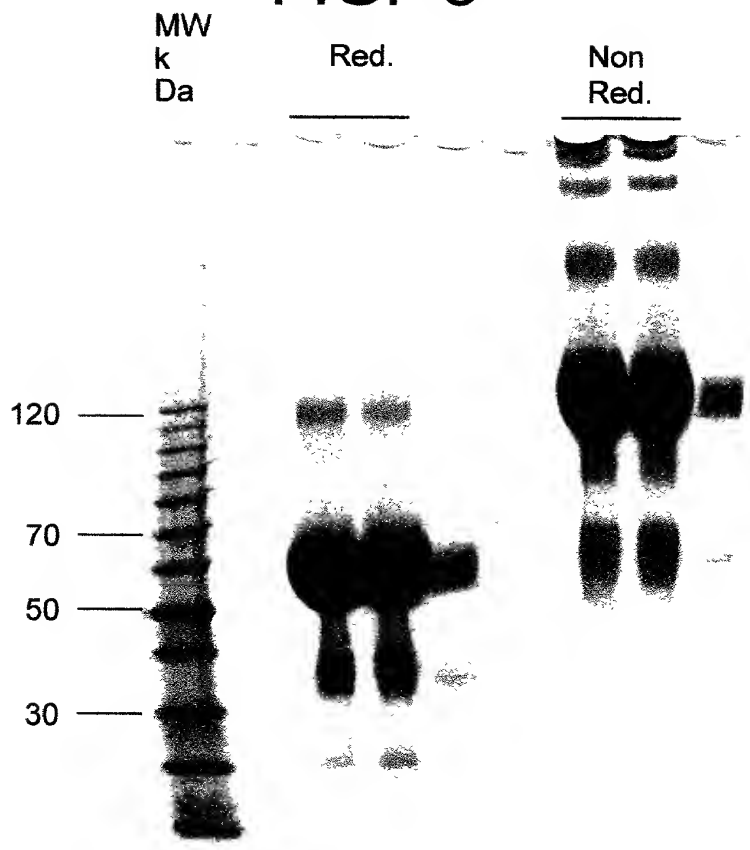
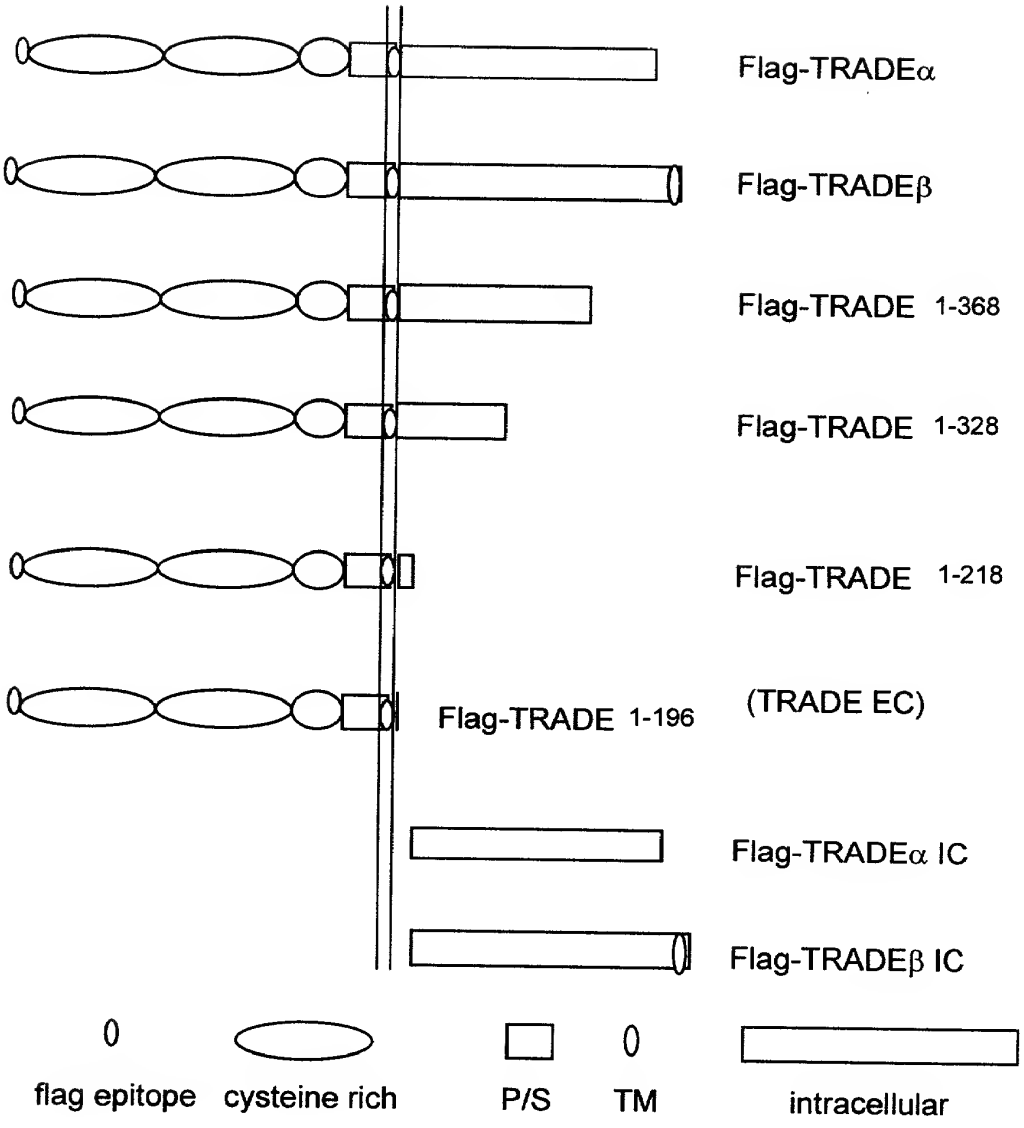


FIG. 9



Deletion analysis

FIG. 10

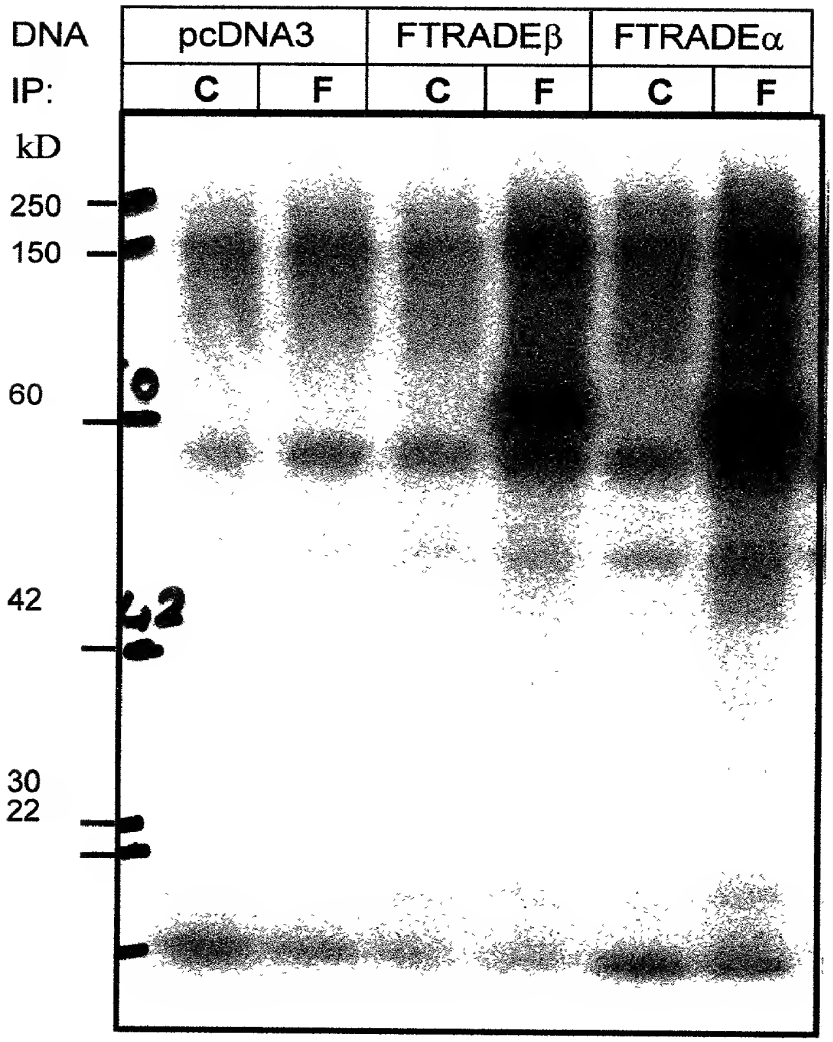
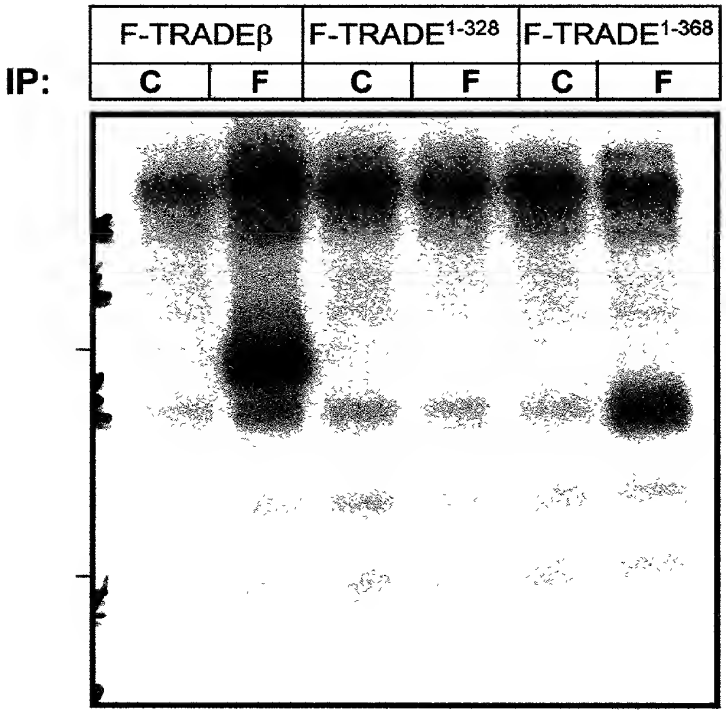
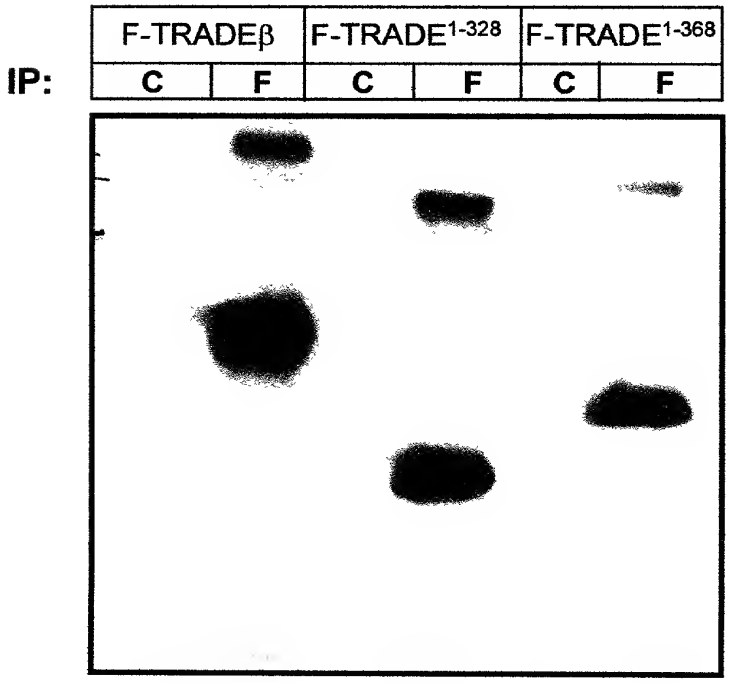


FIG. 11A



Kinase assay

FIG. 11B



anti-Flag blot

FIG. 12A

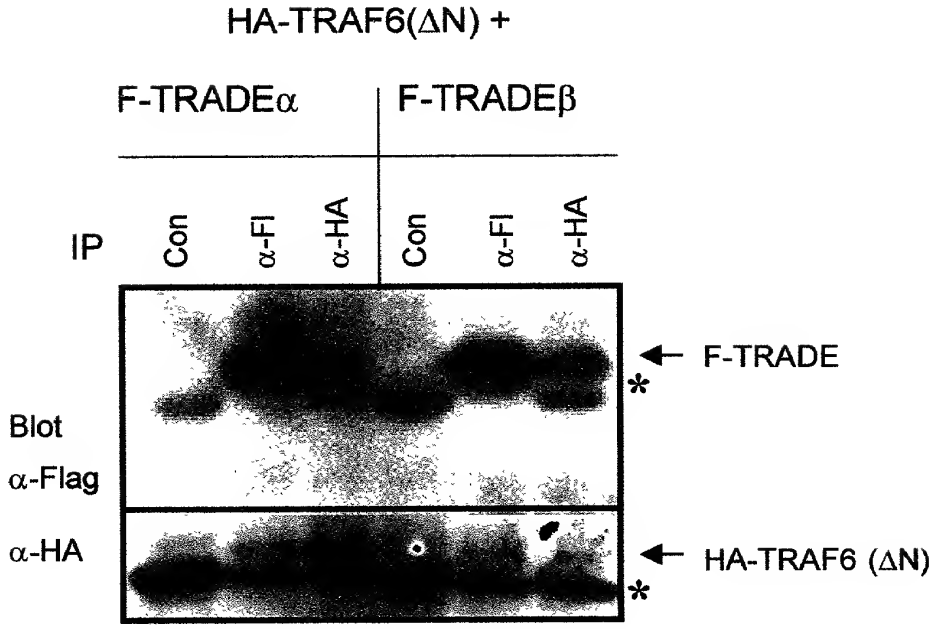


FIG. 12B

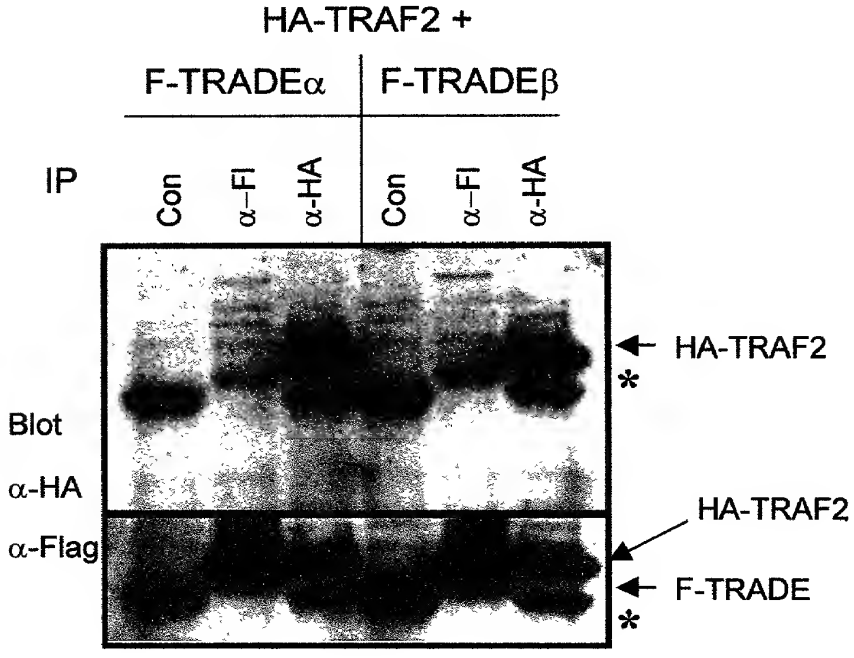


FIG. 13

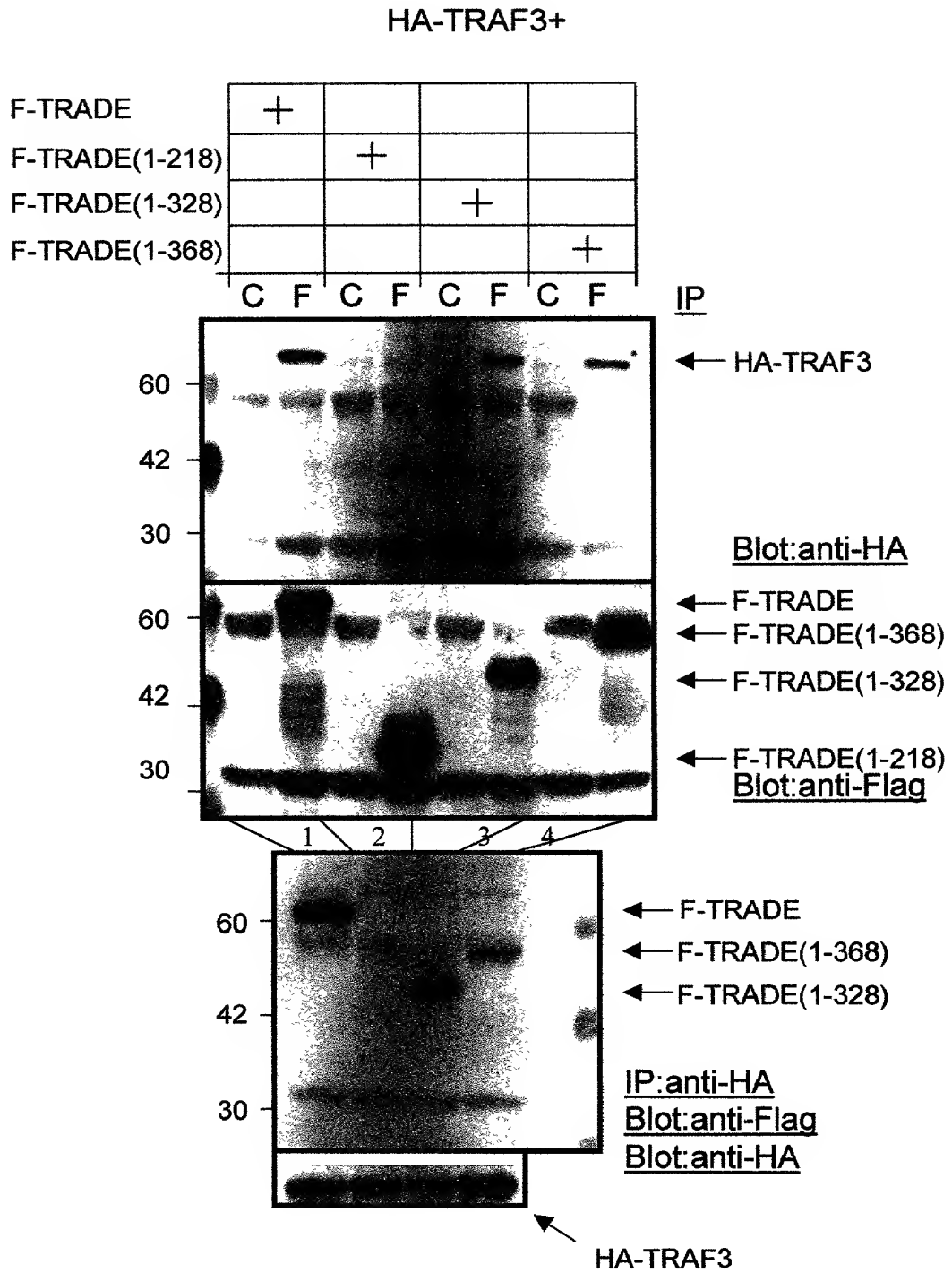

HA-TRAF3+
F-TRADE
F-TRADE(1-218)
F-TRADE(1-328)
F-TRADE(1-368)
C F C F C F C F
IP
HA-TRAF3
60
42
30
Blot:anti-HA
F-TRADE
F-TRADE(1-368)
F-TRADE(1-328)
F-TRADE(1-218)
Blot:anti-Flag
1 2 3 4
F-TRADE
F-TRADE(1-368)
F-TRADE(1-328)
IP:anti-HA
Blot:anti-Flag
Blot:anti-HA
HA-TRAF3

FIG. 14A

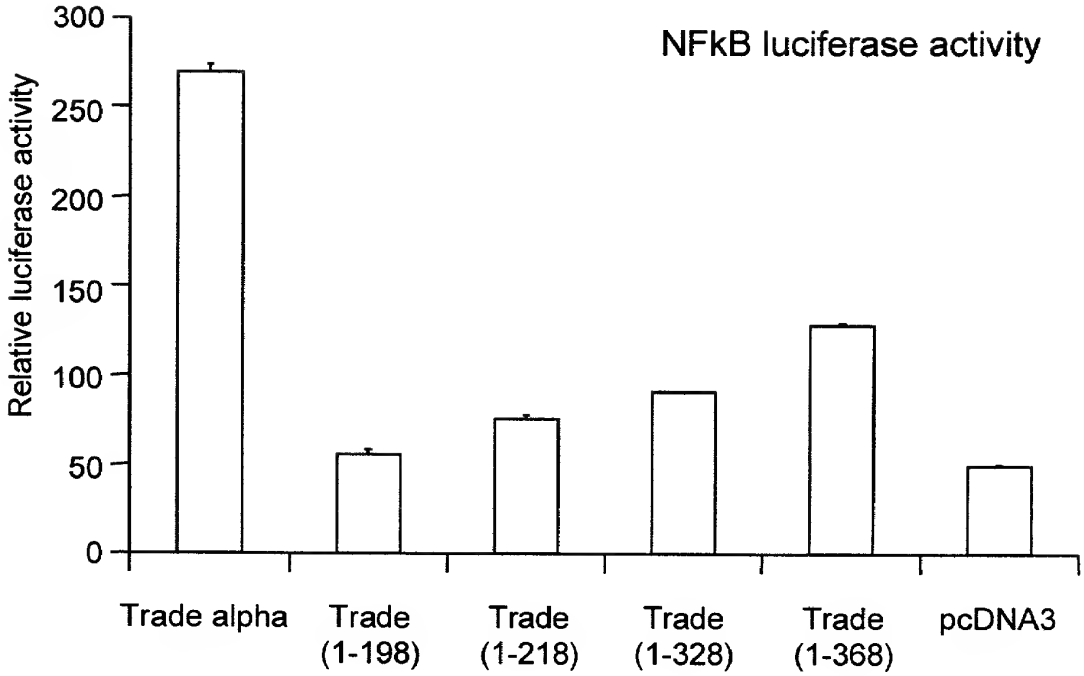
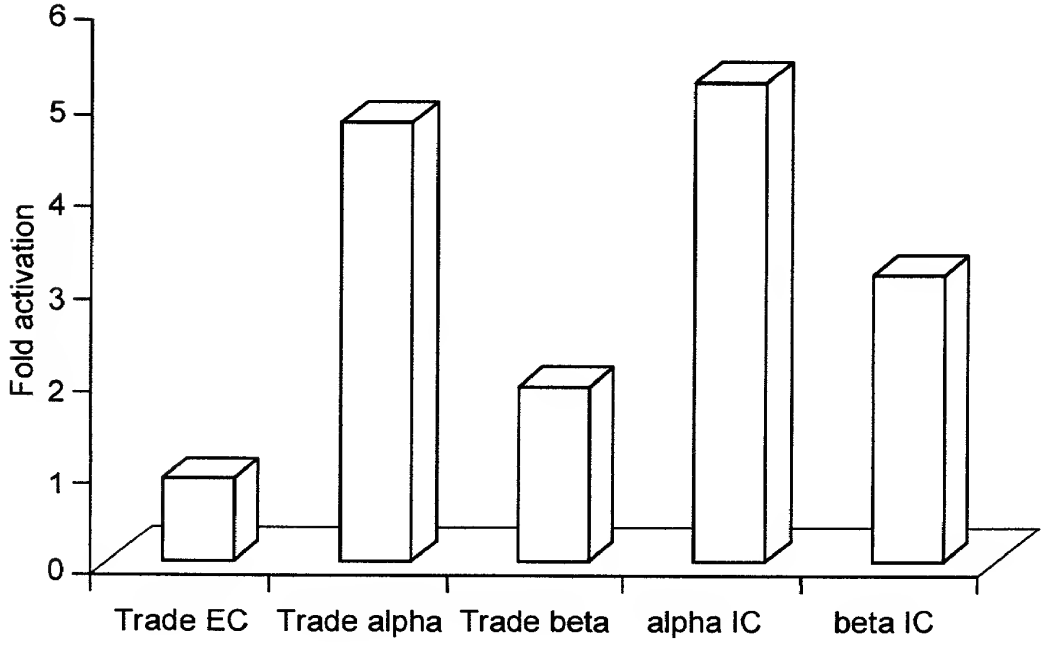



FIG. 14B